**Electron arrangement**

**1)** (a) Draw the electron arrangement for the atoms magnesium and chlorine

(b) Draw the electron arrangement for the magnesium and chloride ions

(c) Explain how magnesium and chlorine atoms react to form ions using the

electron arrangements you have drawn above. Relate your answers to the

positions of the atoms on the periodic table of elements.

**2)** Calcium, chlorine, fluorine and magnesium are all elements of the periodictable.

(a) Using the periodic table in your resource booklet, state the electron

arrangements for the atoms fluorine and chlorine.

(b) Predict the number of valence electrons for bromine and iodine, and give an

explanation for your choice.

(c) Explain how the formation of the calcium ion differs from the formation of the

chloride ion, and relate this to the location of the elements on the periodic table.

**3)** (a) Write the electron arrangement for each of the elements magnesium,

aluminium and sulphur.

(i) For the elements Magnesium and Sulfur, state whether each is a **metal** or

**non-metal**.

(ii) Explain how the elements magnesium and sulfur react to form the compound

magnesium sulfide.

**4)** (a) (i) Using the Periodic Table in the Resource Booklet, give the electron

arrangements of sodium and nitrogen.

(ii) Using these electron arrangements, explain how sodium and nitrogen differ in

their ability to form ions.

(b) Compare and contrast the electron arrangements of the Group 1 metals,

**sodium** and **lithium**.

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